

REMARKS

By this Amendment, Claim 13 is currently amended. Claims 25, 26 and 32 are withdrawn without prejudice, and Claims 14 - 24 and 27 - 31 remain unchanged. Claims 13 - 24 and 27 - 31 are currently pending in the present application.

In the Office Action, claims 13, 15, 17, 19 and 27 were rejected under 35 USC § 102(b) as being anticipated by U.S. Patent No. 2,923,786 ("Jones"). Claims 14, 18 and 31 were rejected under 35 USC § 103(a) as being unpatentable over Jones. Claims 16, 20-24 and 28-30 were rejected under 35 USC § 103(a) as being unpatentable over Jones, and further in view of U.S. Patent Publication No. 2003/0147450 A1 ("Witonsky").

Amended independent Claim 13 recites a process for monitoring the temperature in a refrigerator. The process includes the steps of forming a unit from a temperature sensitive element and a thermal buffer liquid in a substantially transparent container. The temperature sensitive element is in substantially non-insulated contact with the thermal buffer liquid. The unit container is placed at a site to be monitored inside a refrigerator. A temperature variable property of the temperature sensitive element is visually observed to determine if the temperature in the refrigerator is at, below or above a predetermined temperature range.

Independent Claim 17 recites a unit for monitoring the temperature in a refrigerator which includes a container, a thermal buffer liquid in the container, and a temperature sensitive element in thermal contact with the buffer liquid.

Independent Claim 27 further claims a temperature sensitive element for a unit for monitoring the temperature in a refrigerator. The unit includes a container with a thermal buffer liquid therein. The temperature sensitive element includes a body for thermal contact with the buffer liquid which is immersed to swim in the buffer liquid, and having different substantially discrete values of a property which can be visually observed of at least one of above or below a temperature limit to be monitored.

It is respectfully urged that the claimed invention is not anticipated by or obvious from the cited references, as will become more clearly evident from the following detailed discussion of these references, which is presented herein for the Examiner's kind consideration.

Jones discloses an alarm device for use on a dial thermometer. More particularly, the device of Jones is used in a refrigerator, for example, employed in storing blood, serum or other materials which must be kept within limits of a designated temperature range, and which must maintain containers containing the materials within such temperature limits.

A container is filled with liquid such as water which assumes substantially the same temperature as materials in other containers. A dial thermometer having a sensing element connected thereto, such as a vessel containing gas, includes a sensing element inserted in container 13. A flexible conduit 16 connects the sensing element to the dial thermometer which is resident, as shown in Fig. 1, outside of the refrigerator. The thermometer is of an electrically operated type in which the sensing element is a temperature-responsive electrical device such as a thermocouple connected to a suitable meter movement mounted in the cover of the thermometer housing. The meter

movement is mechanically coupled to a shaft in a conventional manner to rotate a pointer indicating temperature.

As will be appreciated by the Examiner, and particularly with respect to the rejections of Claims 13, 15, 17, 19 and 27, although Jones shows a sensing element in what appears to be a transparent container, it clearly fails to anticipate or render obvious a step of visually observing a temperature variable property of the temperature sensitive element to determine temperature conditions, particularly as to a temperature sensitive element which is placed within the thermal buffer liquid in the substantially transparent container, with the temperature indicator being viewed through the wall of the container. Jones US Patent No. 2,923,786 instead discloses that its dial thermometer 14 must be observed outside of the refrigerator (namely, the temperature indicating scale is mounted on the top of the refrigerator).

Similarly, as to Claim 27, Jones clearly fails to teach or suggest the body immersed to swim in the buffer liquid with the body having different substantially discreet values of the property which can be visually observed relative to temperature limit to be monitored.

With respect to the Examiner's comment regarding Claim 31, considering that the Jones sensor is an electrical device connected via a conduit 16 to an electromechanical device (i.e., the dial thermometer) located outside the refrigerator, the concept of having a device capable of floating in water or submerged, and in particular in the form of the fish, cannot be considered obvious from Jones since there is no teachings of a comparable function such as floating or being submerged while eliminating or reducing drag force of the device.

Witonsky et al US Patent Application No. 2003/0147450 discloses that its temperature sensing strip 18 is insulated by a space 19 from the hot liquid, whereupon this prior art reference thus does not disclose the use of a thermal buffer liquid that is not an insulator. Witonsky merely teaches a temperature measuring device which includes a sensing strip disposed within a housing for agitating a material. It is clear that the device is merely a device for indicating whether a liquid is too hot such as in the case of coffee or soup in a mug. The mug is not transparent as fully indicated by the dash lines illustrated in Fig. 1 of the patent. More particularly, the patent specifically states at paragraph 21 thereof that the stick is withdrawn to allow the user to take a reading of the temperature of the coffee such that the reading will persist sufficiently long enough to take the reading before the sensing strip starts to cool.

Thus, the concept of having the sensing device which is readily observable through a transparent wall of a container resident in a refrigerator without disturbing the contents of the container is simply not suggested by Witonsky alone or in combination with the teachings of Jones. Such a combination would require substantial modification of Jones to eliminate the dial thermometer 14, and substantially have all of its components reworked in a manner which is not obvious from the combination of references, absent a hindsight interpretation of the references after knowledge of Applicants' invention.

For these and other reasons, Jones and Witonsky, either alone or in combination do not teach or suggest the subject matter defined by independent Claims 13, 17 and 27. Claims 14-16, 18-24, and 28-31 depend from the previously referenced independent Claims and are allowable for the same reasons, and also because they recite additional patentable subject matter.

CONCLUSION

In view of the above, entry of the present Amendment and allowance of claims 13 – 24 and 27 – 31 are respectfully requested. If the Examiner has any questions regarding this amendment, the Examiner is requested to contact the undersigned. If an extension of time for this paper is required, petition for extension is herewith made.

Respectfully submitted,



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